

File EL 7100
General
APR 1968

MEMORANDUM FOR: Deputy Director/Research

SUBJECT : Conference on Research Potential of
the Naval Radio Research Station
(NRRS)

1. In accordance with your request, I attended a panel meeting of the President's Scientific Advisory Committee on the above subject which was held on 14 April. The list of attendees is attached. Characteristics of the 600' antenna, its present status and outlook for meeting performance specifications were covered during the meeting which consumed the entire day. You already are aware of the technical characteristics of the antenna which will not again be recounted.

2. About one half of the discussion time was concerned with research tasks in radio and radar astronomy which could be accomplished by the NRRS. These tasks are recounted in the attached folder and discussions in the panel provided a consensus that the instruments could accomplish the tasks which are listed. Further, it was generally agreed that the tasks were of interest as scientific experiments and many of those relating to the solar system were important to U.S. space research and exploration. There did not appear to be any single utilization of the NRRS which in itself is of sufficient importance to warrant the major expenditure of funds which is required to complete the device. The panel seemed to agree that in the aggregate the NRRS would provide a very useful research tool. An executive session of the panel was held after all other participants were dismissed, and I have no knowledge of the actual recommendations made to the President's Scientific Advisor.

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3. The status and technical outlook of development and engineering tasks consumed the majority of the remaining time of the discussion. Details of the various systems (aiming reference system, surface control system, focal point control system, drive control system, etc.) were discussed at length. It appeared that much actual construction had been delayed until extensive detailed structural analysis by computers had been accomplished. This analysis seems now well in hand and NRL is confident that it can satisfactorily meet the stringent technical requirements. Dr. Bruce Rule, California Institute of Technology, had made an independent study of this aspect and concluded that the time schedule for completion in 1965 was proper and that the project as a whole was in a "go" condition. In a summary of status it was stated that 37 million dollars had been spent, 98 million dollars committed, about 50 percent of the basic construction had been completed, 70 percent of the engineering was finished, and the overall project was judged to be 27 percent complete.

4. At the end of the general discussion period a conference was held with Dr. Purcell, Dr. Rechtin, Dr. Villard and Dr. Robinson concerning the intelligence aspects of the project. This group had formed no opinion concerning the intelligence potential and were eager to determine the position of the Agency in this matter. I provided the position which had been submitted to the DCI and gave the primary reasons for this stand. There was general agreement that this was probably correct although several questions did arise. Dr. Rechtin stated his belief that the intelligence requirements could be met by a 300' antenna, a change which could be made but would require a complete redesign. Dr. Purcell reiterated his previous skepticism concerning the intelligence potential in light of other collection possibilities such as satellites.

6. In summary, the research potential of the NRRS appeared to be of interest and importance to the panel. The most important area seemed to be assistance which could be provided to the space exploration program.

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Chief
ELINT & Special Projects Division

Attachments:

- (1) Membership List
- (2) NRL Booklet

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